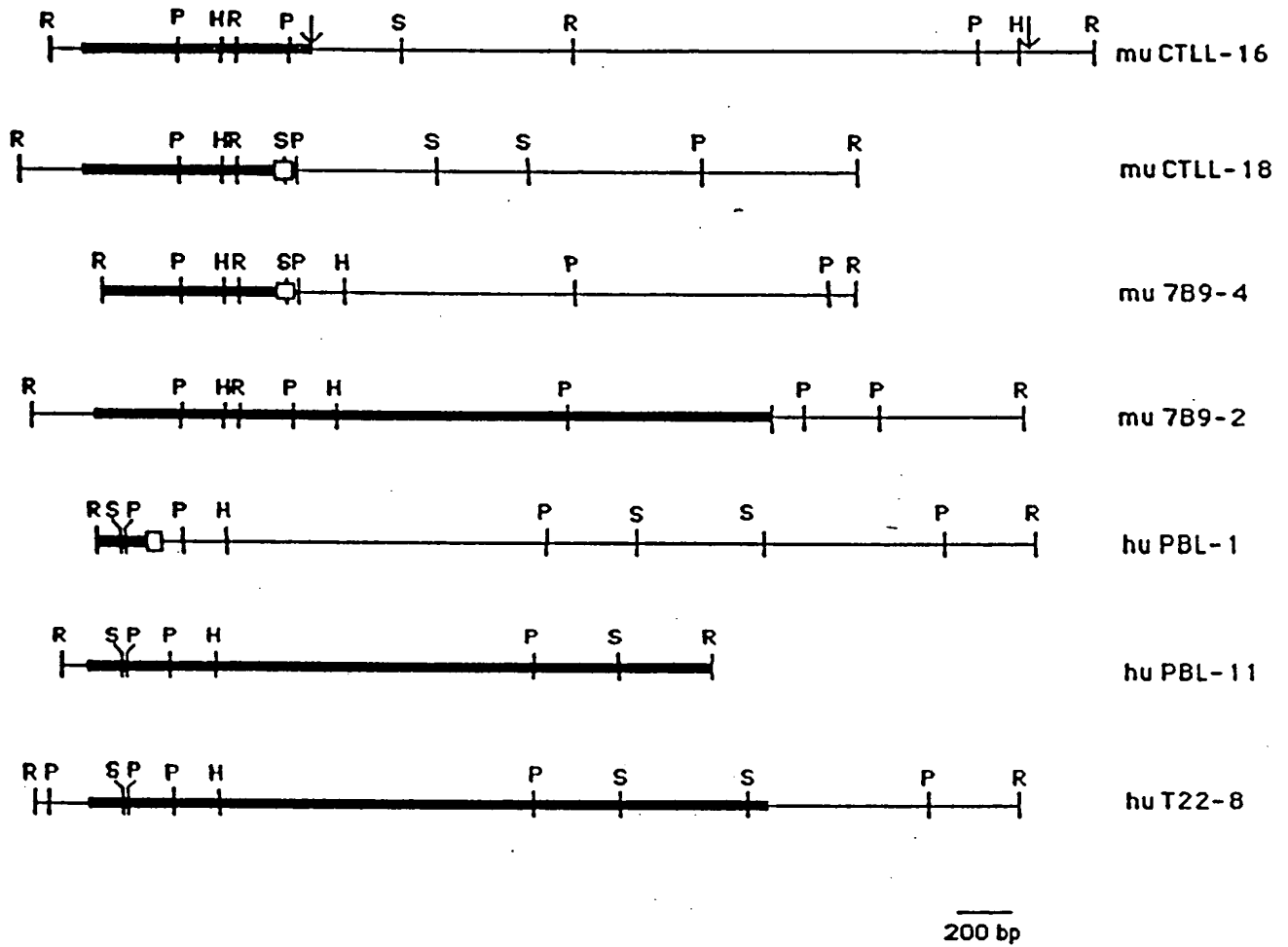


**FIGURE 1**



**FIGURE 2A**

ATG	GGG	CGG	CTT	TGC	ACC	AAG	TTC	CTG	ACC	TCT	GTG	GGC	TGT	CTG	-31
Met	Gly	Arg	Leu	Cys	Thr	Lys	Phe	Leu	Thr	Ser	Val	Gly	Cys	Leu	-11
ATT	TTG	CTG	TTG	GTG	ACT	GGA	TCT	GGG	AGC	ATC	AAG	GTC	CTG	GGT	15
Ile	Leu	Leu	Leu	Val	Thr	Gly	Ser	Gly	Ser	Ile	Lys	Val	Leu	Gly	5
GAG	CCC	ACC	TGC	TTC	TCT	GAC	TAC	ATC	CGC	ACT	TCC	ACG	TGT	GAG	60
Glu	Pro	Thr	Cys	Phe	Ser	Asp	Tyr	Ile	Arg	Thr	Ser	Thr	Cys	Glu	20
TGG	TTC	CTG	GAT	AGC	GCT	GTG	GAC	TGC	AGT	TCT	CAG	CTC	TGC	CTA	105
Trp	Phe	Leu	Asp	Ser	Ala	Val	Asp	Cys	Ser	Ser	Gln	Leu	Cys	Leu	35
CAC	TAC	AGG	CTG	ATG	TTC	TTC	GAG	TTC	TCT	GAA	AAC	CTC	ACA	TGC	150
His	Tyr	Arg	Leu	Met	Phe	Phe	Glu	Phe	Ser	Glu	Asn	Leu	Thr	Cys	50
ATC	CCG	AGG	AAC	AGT	GCC	AGC	ACT	GTG	TGT	GTG	TGC	CAC	ATG	GAA	195
Ile	Pro	Arg	Asn	Ser	Ala	Ser	Thr	Val	Cys	Val	Cys	His	Met	Glu	65
ATG	AAT	AGG	CCG	GTC	CAA	TCA	GAC	AGA	TAC	CAG	ATG	GAA	CTG	TGG	240
Met	Asn	Arg	Pro	Val	Gln	Ser	Asp	Arg	Tyr	Gln	Met	Glu	Leu	Trp	80
GCT	GAG	CAC	AGA	CAG	CTG	TGG	CAG	GGC	TCC	TTC	AGC	CCC	AGT	GGT	285
Ala	Glu	His	Arg	Gln	Leu	Trp	Gln	Gly	Ser	Phe	Ser	Pro	Ser	Gly	95
AAT	GTG	AAG	CCC	CTA	GCT	CCA	GAC	AAC	CTC	ACA	CTC	CAC	ACC	AAT	330
Asn	Val	Lys	Pro	Leu	Ala	Pro	Asp	Asn	Leu	Thr	Leu	His	Thr	Asn	110
GTG	TCC	GAC	GAA	TGG	CTG	CTG	ACC	TGG	AAT	AAC	CTG	TAC	CCA	TCG	375
Val	Ser	Asp	Glu	Trp	Leu	Leu	Thr	Trp	Asn	Asn	Leu	Tyr	Pro	Ser	125
AAC	AAC	TTA	CTG	TAC	AAA	GAC	CTC	ATC	TCC	ATG	GTC	AAC	ATC	TCC	420
Asn	Asn	Leu	Leu	Tyr	Lys	Asp	Leu	Ile	Ser	Met	Val	Asn	Ile	Ser	140
AGA	GAG	GAC	AAC	CCT	GCA	GAA	TTC	ATA	GTC	TAT	AAT	GTG	ACC	TAC	465
Arg	Glu	Asp	Asn	Pro	Ala	Glu	Phe	Ile	Val	Tyr	Asn	Val	Thr	Tyr	155
AAG	GAA	CCC	AGG	CTG	AGC	TTC	CCG	ATC	AAC	ATC	CTG	ATG	TCA	GGG	510
Lys	Glu	Pro	Arg	Leu	Ser	Phe	Pro	Ile	Asn	Ile	Leu	Met	Ser	Gly	170
GTC	TAC	TAT	ACG	GCG	CGT	GTG	AGG	GTC	AGA	TCC	CAG	ATA	CTC	ACT	555
Val	Tyr	Tyr	Thr	Ala	Arg	Val	Arg	Val	Arg	Ser	Gln	Ile	Leu	Thr	185
GGC	ACC	TGG	AGT	GAG	TGG	AGT	CCT	AGC	ATC	ACG	TGG	TAC	AAC	CAC	600
Gly	Thr	Trp	Ser	Glu	Trp	Ser	Pro	Ser	Ile	Thr	Trp	Tyr	Asn	His	200
TTC	CAG	CTG	CCC	CTG	ATA	CAG	CGC	CTT	CCA	CTG	GGG	GTC	ACC	ATC	645
Phe	Gln	Leu	Pro	Leu	Ile	Gln	Arg	Leu	Pro	Leu	Gly	Val	Thr	Ile	215
TCC	TGC	CTC	TGC	ATC	CCG	TTG	TTT	TGC	CTG	TTC	TGT	TAC	TTC	AGC	690
Ser	Cys	Leu	Cys	Ile	Pro	Leu	Phe	Cys	Leu	Phe	Cys	Tyr	Phe	Ser	230
ATT	ACC	AAG	ATT	AAG	AAG	ATA	TGG	TGG	GAC	CAG	ATT	CCC	ACC	CCA	735
Ile	Thr	Lys	Ile	Lys	Lys	Ile	Trp	Trp	Asp	Gln	Ile	Pro	Thr	Pro	245

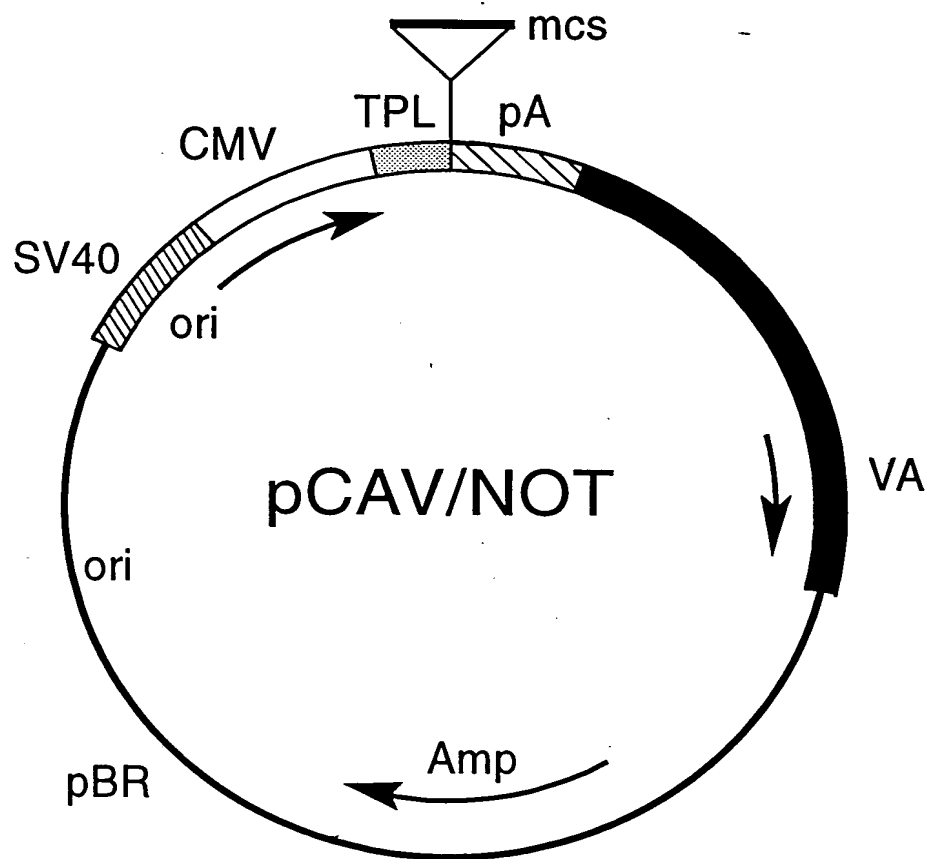
**FIGURE 2B**

GCA	CGC	AGT	CCC	TTG	GTG	GCC	ATC	ATC	ATT	CAG	GAT	GCA	CAG	GTG	780
Ala	Arg	Ser	Pro	Leu	Val	Ala	Ile	Ile	Ile	Gln	Asp	Ala	Gln	Val	260
CCC	CTC	TGG	GAT	AAG	CAG	ACC	CGA	AGC	CAG	GAG	TCA	ACC	AAG	TAC	825
Pro	Leu	Trp	Asp	Lys	Gln	Thr	Arg	Ser	Gln	Glu	Ser	Thr	Lys	Tyr	275
CCG	CAC	TGG	AAA	ACT	TGT	CTA	GAC	AAG	CTG	CTG	CCT	TGC	TTG	CTG	870
Pro	His	Trp	Lys	Thr	Cys	Leu	Asp	Lys	Leu	Leu	Pro	Cys	Leu	Leu	290
AAG	CAC	AGA	GTA	AAG	AAG	AAG	ACA	GAC	TTC	CCG	AAG	GCT	GCC	CCA	915
Lys	His	Arg	Val	Lys	Lys	Lys	Thr	Asp	Phe	Pro	Lys	Ala	Ala	Pro	305
ACC	AAG	TCT	CTC	CAG	AGT	CCT	GGA	AAG	GCA	GGC	TGG	TGT	CCC	ATG	960
Thr	Lys	Ser	Leu	Gln	Ser	Pro	Gly	Lys	Ala	Gly	Trp	Cys	Pro	Met	320
GAG	GTC	AGC	AGG	ACC	GTC	CTC	TGG	CCA	GAG	AAT	GTT	AGT	GTC	AGT	1005
Glu	Val	Ser	Arg	Thr	Val	Leu	Trp	Pro	Glu	Asn	Val	Ser	Val	Ser	335
GTG	GTG	CGC	TGT	ATG	GAG	CTG	TTT	GAG	GCC	CCA	GTA	CAG	AAT	GTG	1050
Val	Val	Arg	Cys	Met	Glu	Leu	Phe	Glu	Ala	Pro	Val	Gln	Asn	Val	350
GAG	GAG	GAA	GAA	GAT	GAG	ATA	GTC	AAA	GAG	GAC	CTG	AGC	ATG	TCA	1095
Glu	Glu	Glu	Glu	Asp	Glu	Ile	Val	Lys	Glu	Asp	Leu	Ser	Met	Ser	365
CCT	GAG	AAC	AGC	GGA	GGC	TGC	GGC	TTC	CAG	GAG	aGC	CAG	GCA	GAC	1140
Pro	Glu	Asn	Ser	Gly	Gly	Cys	Gly	Phe	Gln	Glu	Ser	Gln	Ala	Asp	380
ATC	ATG	GCT	CGG	CTC	ACT	GAG	AAC	CTG	TTT	TCC	GAC	TTG	TTG	GAG	1185
Ile	Met	Ala	Arg	Leu	Thr	Glu	Asn	Leu	Phe	Ser	Asp	Leu	Leu	Glu	395
GCT	GAG	AAT	GGG	GGC	CTT	GGC	CAG	TCA	GCC	TTG	GCA	GAG	TCA	TGC	1230
Ala	Glu	Asn	Gly	Gly	Leu	Gly	Gln	Ser	Ala	Leu	Ala	Glu	Ser	Cys	410
TCC	CCT	CTG	CCT	TCA	GGA	AGT	GGG	CAG	GCT	TCT	GTA	TCC	TGG	GCC	1275
Ser	Pro	Leu	Pro	Ser	Gly	Ser	Gly	Gln	Ala	Ser	Val	Ser	Trp	Ala	425
TGC	CTC	CCC	ATG	GGG	CCC	AGT	GAG	GAG	GCC	ACA	TGC	CAG	GTC	ACA	1320
Cys	Leu	Pro	Met	Gly	Pro	Ser	Glu	Glu	Ala	Thr	Cys	Gln	Val	Thr	440
GAG	CAG	CCT	TCA	CAC	CCA	GGC	CCT	CTT	TCA	GGC	AGC	CCA	GCC	CAG	1365
Glu	Gln	Pro	Ser	His	Pro	Gly	Pro	Leu	Ser	Gly	Ser	Pro	Ala	Gln	455
AGT	GCA	CCT	ACT	CTG	GCT	TGC	ACG	CAG	GTC	CCA	CTT	GTC	CTT	GCA	1410
Ser	Ala	Pro	Thr	Leu	Ala	Cys	Thr	Gln	Val	Pro	Leu	Val	Leu	Ala	470
GAC	AAT	CCT	GCC	TAC	CGG	AGT	TTT	AGT	GAC	TGC	TGT	AGC	CCG	GCC	1455
Asp	Asn	Pro	Ala	Tyr	Arg	Ser	Phe	Ser	Asp	Cys	Cys	Ser	Pro	Ala	485
CCA	AAT	CCT	GGA	GAG	CTG	GCT	CCA	GAG	CAG	CAG	CAG	GCT	GAT	CAT	1500
Pro	Asn	Pro	Gly	Glu	Leu	Ala	Pro	Glu	Gln	Gln	Gln	Ala	Asp	His	500
CTG	GAA	GAA	GAG	GAG	CCT	CCA	AGC	CCG	GCT	GAC	CCC	CAT	TCT	TCA	1545
Leu	Glu	Glu	Glu	Glu	Pro	Pro	Ser	Pro	Ala	Asp	Pro	His	Ser	Ser	515

**FIGURE 2C**

GGG	CCA	CCA	ATG	CAG	CCA	GTG	GAG	AGC	TGG	GAG	CAG	ATC	CTT	CAC	1590
Gly	Pro	Pro	Met	Gln	Pro	Val	Glu	Ser	Trp	Glu	Gln	Ile	Leu	His	530
ATG	AGT	GTC	CTG	CAG	CAT	GGG	GCA	GCT	GCT	GGC	TCC	ACC	CCA	GCC	1635
Met	Ser	Val	Leu	Gln	His	Gly	Ala	Ala	Ala	Gly	Ser	Thr	Pro	Ala	545
CCT	GCC	GGT	GGC	TAC	CAG	GAG	TTT	GTG	CAG	GCA	GTG	AAG	CAG	GGT	1680
Pro	Ala	Gly	Gly	Tyr	Gln	Glu	Phe	Val	Gln	Ala	Val	Lys	Gln	Gly	560
GCC	GCC	CAG	GAT	CCT	GGG	GTG	CCT	GGT	GTC	AGG	CCT	TCT	GGA	GAC	1725
Ala	Ala	Gln	Asp	Pro	Gly	Val	Pro	Gly	Val	Arg	Pro	Ser	Gly	Asp	575
CCC	GGT	TAC	AAG	GCC	TTC	TCG	AGC	CTG	CTC	AGC	AGC	AAT	GGC	ATC	1770
Pro	Gly	Tyr	Lys	Ala	Phe	Ser	Ser	Leu	Leu	Ser	Ser	Asn	Gly	Ile	590
CGC	GGG	GAC	ACA	GCA	GCA	GCG	GGG	ACT	GAC	GAT	GGG	CAT	GGA	GGC	1815
Arg	Gly	Asp	Thr	Ala	Ala	Ala	Gly	Thr	Asp	Asp	Gly	His	Gly	Gly	605
TAC	AAG	CCC	TTC	CAG	AAT	CCT	GTT	CCT	AAC	CAG	TCC	CCT	AGC	TCC	1860
Tyr	Lys	Pro	Phe	Gln	Asn	Pro	Val	Pro	Asn	Gln	Ser	Pro	Ser	Ser	620
GTG	CCC	TTA	TTT	ACT	TTC	GGA	CTA	GAC	ACG	GAG	CTG	TCA	CCC	AGT	1905
Val	Pro	Leu	Phe	Thr	Phe	Gly	Leu	Asp	Thr	Glu	Leu	Ser	Pro	Ser	635
CCT	CTG	AAC	TCA	GAC	CCA	CCC	AAA	AGC	CCC	CCA	GAA	TGC	CTT	GGT	1950
Pro	Leu	Asn	Ser	Asp	Pro	Pro	Lys	Ser	Pro	Pro	Glu	Cys	Leu	Gly	650
CTG	GAG	CTG	GGG	CTC	AAA	GGA	GGT	GAC	TGG	GTG	AAG	GCC	CCT	CCT	1995
Leu	Glu	Leu	Gly	Leu	Lys	Gly	Gly	Asp	Trp	Val	Lys	Ala	Pro	Pro	665
CCT	GCA	GAT	GAG	GTG	CCC	AAG	CCC	TTT	GGG	GAT	GAC	CTG	GGC	TTT	2040
Pro	Ala	Asp	Glu	Val	Pro	Lys	Pro	Phe	Gly	Asp	Asp	Leu	Gly	Phe	680
GGT	ATT	GTG	TAC	TCG	TCC	CTC	ACT	TGC	CAC	TTG	TGT	GGC	CAC	CTG	2085
Gly	Ile	Val	Tyr	Ser	Ser	Leu	Thr	Cys	His	Leu	Cys	Gly	His	Leu	695
AAG	CAA	CAC	CAC	AGC	CAG	GAG	GAA	GGT	GGC	CAG	AGC	CCC	ATC	GTT	2130
Lys	Gln	His	His	Ser	Gln	Glu	Glu	Gly	Gly	Gln	Ser	Pro	Ile	Val	710
GCT	AGC	CCT	GGC	TGT	GGC	TGC	TGC	TAC	GAT	GAC	AGA	TCA	CCA	TCC	2175
Ala	Ser	Pro	Gly	Cys	Gly	Cys	Cys	Tyr	Asp	Asp	Arg	Ser	Pro	Ser	725
CTG	GGG	AGC	CTC	TCG	GGG	GCC	TTG	GAA	AGC	TGT	CCT	GAG	GGA	ATA	2220
Leu	Gly	Ser	Leu	Ser	Gly	Ala	Leu	Glu	Ser	Cys	Pro	Glu	Gly	Ile	740
CCA	CCA	GAA	GCC	AAC	CTC	ATG	TCA	GCA	CCC	AAG	ACA	CCC	TCA	AAC	2265
Pro	Pro	Glu	Ala	Asn	Leu	Met	Ser	Ala	Pro	Lys	Thr	Pro	Ser	Asn	755
TTG	TCA	GGG	GAG	GGC	AAG	GGC	CCT	GGT	CAC	TCT	CCT	GTT	CCC	AGC	2310
Leu	Ser	Gly	Glu	Gly	Lys	Gly	Pro	Gly	His	Ser	Pro	Val	Pro	Ser	770
CAG	ACG	ACC	GAG	GTG	CCT	GTG	GGC	GCC	CTG	GGC	ATT	GCT	GTT	TCT	2355
Gln	Thr	Thr	Glu	Val	Pro	Val	Gly	Ala	Leu	Gly	Ile	Ala	Val	Ser	785

Figure 3



**FIGURE 4A**

ATG	GGG	TGG	CTT	TGC	TCT	GGG	CTC	CTG	TTC	CCT	GTG	AGC	TGC	CTG	-31
Met	Gly	Trp	Leu	Cys	Ser	Gly	Leu	Leu	Phe	Pro	Val	Ser	Cys	Leu	-11
GTC	CTG	CTG	CAG	GTG	GCA	AGC	TCT	GGG	AAC	ATG	AAG	GTC	TTG	CAG	15
Val	Leu	Leu	Gln	Val	Ala	Ser	Ser	Gly	Asn	<del>Met</del>	Lys	Val	Leu	Gln	5
GAG	CCC	ACC	TGC	GTC	TCC	GAC	TAC	ATG	AGC	ATC	TCT	ACT	TGC	GAG	60
Glu	Pro	Thr	Cys	Val	Ser	Asp	Tyr	Met	Ser	Ile	Ser	Thr	Cys	Glu	20
TGG	AAG	ATG	AAT	GGT	CCC	ACC	AAT	TGC	AGC	ACC	GAG	CTC	<del>CGC</del>	CTG	105
Trp	Lys	Met	Asn	Gly	Pro	Thr	Asn	Cys	Ser	Thr	Glu	Leu	Arg	Leu	35
TTG	TAC	CAG	CTG	GTT	TTT	CTG	CTC	TCC	GAA	GCC	CAC	ACG	TGT	ATC	150
Leu	Tyr	Gln	Leu	Val	Phe	Leu	Leu	Ser	Glu	Ala	His	Thr	Cys	Ile	50
CCT	GAG	AAC	AAC	GGA	GGC	GCG	GGG	TGC	GTG	TGC	CAC	CTG	CTC	ATG	195
Pro	Glu	Asn	Asn	Gly	Gly	Ala	Gly	Cys	Val	Cys	His	Leu	Leu	Met	65
GAT	GAC	GTG	GTC	AGT	GCG	GAT	AAC	TAT	ACA	CTG	GAC	CTG	TGG	GCT	240
Asp	Asp	Val	Val	Ser	Ala	Asp	Asn	Tyr	Thr	Leu	Asp	Leu	Trp	Ala	80
GGG	CAG	CAG	CTG	CTG	TGG	AAG	GGC	TCC	TTC	AAG	CCC	AGC	GAG	CAT	285
Gly	Gln	Gln	Leu	Leu	Trp	Lys	Gly	Ser	Phe	Lys	Pro	Ser	Glu	His	95
GTG	AAA	CCC	AGG	GCC	CCA	GGA	AAC	CTG	ACA	GTT	CAC	ACC	AAT	GTC	330
Val	Lys	Pro	Arg	Ala	Pro	Gly	Asn	Leu	Thr	Val	His	Thr	Asn	Val	110
TCC	GAC	ACT	CTG	CTG	CTG	ACC	TGG	AGC	AAC	CCG	TAT	CCC	CCT	GAC	375
Ser	Asp	Thr	Leu	Leu	Leu	Thr	Trp	Ser	Asn	Pro	Tyr	Pro	Pro	Asp	125
AAT	TAC	CTG	TAT	AAT	CAT	CTC	ACC	TAT	GCA	GTC	AAC	ATT	TGG	AGT	420
Asn	Tyr	Leu	Tyr	Asn	His	Leu	Thr	Tyr	Ala	Val	Asn	Ile	Trp	Ser	140
GAA	AAC	GAC	CCG	GCA	GAT	TTC	AGA	ATC	TAT	AAC	GTG	ACC	TAC	CTA	465
Glu	Asn	Asp	Pro	Ala	Asp	Phe	Arg	Ile	Tyr	Asn	Val	Thr	Tyr	Leu	155
GAA	CCC	TCC	CTC	CGC	ATC	GCA	GCC	AGC	ACC	CTG	AAG	TCT	GGG	ATT	510
Glu	Pro	Ser	Leu	Arg	Ile	Ala	Ala	Ser	Thr	Leu	Lys	Ser	Gly	Ile	170
TCC	TAC	AGG	GCA	CGG	GTG	AGG	GCC	TGG	GCT	CAG	TGC	TAT	AAC	ACC	555
Ser	Tyr	Arg	Ala	Arg	Val	Arg	Ala	Trp	Ala	Gln	Cys	Tyr	Asn	Thr	185
ACC	TGG	AGT	GAG	TGG	AGC	CCC	AGC	ACC	AAG	TGG	CAC	AAC	TCC	TAC	600
Thr	Trp	Ser	Glu	Trp	Ser	Pro	Ser	Thr	Lys	Trp	His	Asn	Ser	Tyr	200
AGG	GAG	CCC	TTC	GAG	CAG	CAC	CTC	CTG	CTG	GGC	GTC	AGC	GTT	TCC	645
Arg	Glu	Pro	Phe	Glu	Gln	His	<u>Leu</u>	<u>Leu</u>	<u>Leu</u>	<u>Gly</u>	<u>Val</u>	<u>Ser</u>	<u>Val</u>	<u>Ser</u>	215
TGC	ATT	GTC	ATC	CTG	GCC	GTC	TGC	CTG	TTG	TGC	TAT	GTC	AGC	ATC	690
<u>Cys</u>	<u>Ile</u>	<u>Val</u>	<u>Ile</u>	<u>Leu</u>	<u>Ala</u>	<u>Val</u>	<u>Cys</u>	<u>Leu</u>	<u>Leu</u>	<u>Cys</u>	<u>Tyr</u>	<u>Val</u>	<u>Ser</u>	<u>Ile</u>	230
ACC	AAG	ATT	AAG	AAA	GAA	TGG	TGG	GAT	CAG	ATT	CCC	AAC	CCA	GCC	735
<u>Thr</u>	<u>Lys</u>	<u>Ile</u>	<u>Lys</u>	<u>Lys</u>	<u>Glu</u>	<u>Trp</u>	<u>Trp</u>	<u>Asp</u>	<u>Gln</u>	<u>Ile</u>	<u>Pro</u>	<u>Asn</u>	<u>Pro</u>	<u>Ala</u>	245

**FIGURE 4B**

CGC	AGC	CGC	CTC	GTG	GCT	ATA	ATA	ATC	CAG	GAT	GCT	CAG	GGG	TCA	780
Arg	Ser	Arg	Leu	Val	Ala	Ile	Ile	Ile	Gln	Asp	Ala	Gln	Gly	Ser	260
CAG	TGG	GAG	AAG	CGG	TCC	CGA	GGC	CAG	GAA	CCA	GCC	AAG	TGC	CCA	825
Gln	Trp	Glu	Lys	Arg	Ser	Arg	Gly	Gln	Glu	Pro	Ala	Lys	Cys	Pro	275
CAC	TGG	AAG	AAT	TGT	CTT	ACC	AAG	CTC	TTG	CCC	TGT	TTT	CTG	GAG	870
His	Trp	Lys	Asn	Cys	Leu	Thr	Lys	Leu	Leu	Pro	Cys	Phe	Leu	Glu	290
CAC	AAC	ATG	AAA	AGG	GAT	GAA	GAT	CCT	CAC	AAG	GCT	GCC	AAA	GAG	915
His	Asn	Met	Lys	Arg	Asp	Glu	Asp	Pro	His	Lys	Ala	Ala	Lys	Glu	305
ATG	CCT	TTC	CAG	GGC	TCT	GGA	AAA	TCA	GCA	TGG	TGC	CCA	GTG	GAG	960
Met	Pro	Phe	Gln	Gly	Ser	Gly	Lys	Ser	Ala	Trp	Cys	Pro	Val	Glu	320
ATC	AGC	AAG	ACA	GTC	CTC	TGG	CCA	GAG	AGC	ATC	AGC	GTG	GTG	CGA	1005
Ile	Ser	Lys	Thr	Val	Leu	Trp	Pro	Glu	Ser	Ile	Ser	Val	Val	Arg	335
TGT	GTG	GAG	TTG	TTT	GAG	GCC	CCG	GTG	GAG	TGT	GAG	GAG	GAG	GAG	1050
Cys	Val	Glu	Leu	Phe	Glu	Ala	Pro	Val	Glu	Cys	Glu	Glu	Glu	Glu	350
GAG	GTA	GAG	GAA	GAA	AAA	GGG	AGC	TTC	TGT	GCA	TCG	CCT	GAG	AGC	1095
Glu	Val	Glu	Glu	Glu	Lys	Gly	Ser	Phe	Cys	Ala	Ser	Pro	Glu	Ser	365
AGC	AGG	GAT	GAC	TTC	CAG	GAG	GGA	AGG	GAG	GGC	ATT	GTG	GCC	CGG	1140
Ser	Arg	Asp	Asp	Phe	Gln	Glu	Gly	Arg	Glu	Gly	Ile	Val	Ala	Arg	380
CTA	ACA	GAG	AGC	CTG	TTC	CTG	GAC	CTG	CTC	GGA	GAG	GAG	AAT	GGG	1185
Leu	Thr	Glu	Ser	Leu	Phe	Leu	Asp	Leu	Leu	Gly	Glu	Glu	Asn	Gly	395
GGC	TTT	TGC	CAG	CAG	GAC	ATG	GGG	GAG	TCA	TGC	CTT	CTT	CCA	CCT	1230
Gly	Phe	Cys	Gln	Gln	Asp	Met	Gly	Glu	Ser	Cys	Leu	Leu	Pro	Pro	410
TCG	GGA	AGT	ACG	AGT	GCT	CAC	ATG	CCC	TGG	GAT	GAG	TTC	CCA	AGT	1275
Ser	Gly	Ser	Thr	Ser	Ala	His	Met	Pro	Trp	Asp	Glu	Phe	Pro	Ser	425
GCA	GGG	CCC	AAG	GAG	GCA	CCT	CCC	TGG	GGC	AAG	GAG	CAG	CCT	CTC	1320
Ala	Gly	Pro	Lys	Glu	Ala	Pro	Pro	Trp	Gly	Lys	Glu	Gln	Pro	Leu	440
CAC	CTG	GAG	CCA	AGT	CCT	CCT	GCC	AGC	CCG	ACC	CAG	AGT	CCA	GAC	1365
His	Leu	Glu	Pro	Ser	Pro	Pro	Ala	Ser	Pro	Thr	Gln	Ser	Pro	Asp	455
AAC	CTG	ACT	TGC	ACA	GAG	ACG	CCC	CTC	GTC	ATC	GCA	GGC	AAC	CCT	1410
Asn	Leu	Thr	Cys	Thr	Glu	Thr	Pro	Leu	Val	Ile	Ala	Gly	Asn	Pro	470
GCT	TAC	CGC	AGC	TTC	AGC	AAC	TCC	CTG	AGC	CAG	TCA	CCG	TGT	CCC	1455
Ala	Tyr	Arg	Ser	Phe	Ser	Asn	Ser	Leu	Ser	Gln	Ser	Pro	Cys	Pro	485
AGA	GAG	CTG	GGT	CCA	GAC	CCA	CTG	CTG	GCC	AGA	CAC	CTG	GAG	GAA	1500
Arg	Glu	Leu	Gly	Pro	Asp	Pro	Leu	Leu	Ala	Arg	His	Leu	Glu	Glu	500
GTA	GAA	CCC	GAG	ATG	CCC	TGT	GTC	CCC	CAG	CTC	TCT	GAG	CCA	ACC	1545
Val	Glu	Pro	Glu	Met	Pro	Cys	Val	Pro	Gln	Leu	Ser	Glu	Pro	Thr	515

**FIGURE 4C**

ACT	GTG	CCC	CAA	CCT	GAG	CCA	GAA	ACC	TGG	GAG	CAG	ATC	CTC	CGC	1590
Thr	Val	Pro	Gln	Pro	Glu	Pro	Glu	Thr	Trp	Glu	Gln	Ile	Leu	Arg	530
CGA	AAT	GTC	CTC	CAG	CAT	GGG	GCA	GCT	GCA	GCC	CCC	GTC	TCG	GCC	1635
Arg	Asn	Val	Leu	Gln	His	Gly	Ala	Ala	Ala	Ala	Pro	Val	Ser	Ala	545
CCC	ACC	AGT	GGC	TAT	CAG	GAG	TTT	GTA	CAT	GCG	GTG	GAG	CAG	GGT	1680
Pro	Thr	Ser	Gly	Tyr	Gln	Glu	Phe	Val	His	Ala	Val	Glu	Gln	Gly	560
GGC	ACC	CAG	GCC	AGT	GCG	GTG	GTG	GGC	TTG	GGT	CCC	CCA	GGA	GAG	1725
Gly	Thr	Gln	Ala	Ser	Ala	Val	Val	Gly	Leu	Gly	Pro	Pro	Gly	Glu	575
GCT	GGT	TAC	AAG	GCC	TTC	TCA	AGC	CTG	CTT	GCC	AGC	AGT	GCT	GTG	1770
Ala	Gly	Tyr	Lys	Ala	Phe	Ser	Ser	Leu	Leu	Ala	Ser	Ser	Ala	Val	590
TCC	CCA	GAG	AAA	TGT	GGG	TTT	GGG	GCT	AGC	AGT	GGG	GAA	GAG	GGG	1815
Ser	Pro	Glu	Lys	Cys	Gly	Phe	Gly	Ala	Ser	Ser	Gly	Glu	Glu	Gly	605
TAT	AAG	CCT	TTC	CAA	GAC	CTC	ATT	CCT	GGC	TGC	CCT	GGG	GAC	CCT	1860
Tyr	Lys	Pro	Phe	Gln	Asp	Leu	Ile	Pro	Gly	Cys	Pro	Gly	Asp	Pro	620
GCC	CCA	GTC	CCT	GTC	CCC	TTG	TTC	ACC	TTT	GGA	CTG	GAC	AGG	GAG	1905
Ala	Pro	Val	Pro	Val	Pro	Leu	Phe	Thr	Phe	Gly	Leu	Asp	Arg	Glu	635
CCA	CCT	CGC	AGT	CCG	CAG	AGC	TCA	CAT	CTC	CCA	AGC	AGC	TCC	CCA	1950
Pro	Pro	Arg	Ser	Pro	Gln	Ser	Ser	His	Leu	Pro	Ser	Ser	Ser	Pro	650
GAG	CAC	CTG	GGT	CTG	GAG	CCG	GGG	GAA	AAG	GTA	GAG	GAC	ATG	CCA	1995
Glu	His	Leu	Gly	Leu	Glu	Pro	Gly	Glu	Lys	Val	Glu	Asp	Met	Pro	665
AAG	CCC	CCA	CTT	CCC	CAG	GAG	CAG	GCC	ACA	GAC	CCC	CTT	GTG	GAC	2040
Lys	Pro	Pro	Leu	Pro	Gln	Glu	Gln	Ala	Thr	Asp	Pro	Leu	Val	Asp	680
AGC	CTG	GGC	AGT	GGC	ATT	GTC	TAC	TCA	GCC	CTT	ACC	TGC	CAC	CTG	2085
Ser	Leu	Gly	Ser	Gly	Ile	Val	Tyr	Ser	Ala	Leu	Thr	Cys	His	Leu	695
TGC	GGC	CAC	CTG	AAA	CAG	TGT	CAT	GGC	CAG	GAG	GAT	GGT	GGC	CAG	2130
Cys	Gly	His	Leu	Lys	Gln	Cys	His	Gly	Gln	Glu	Asp	Gly	Gly	Gln	710
ACC	CCT	GTC	ATG	GCC	AGT	CCT	TGC	TGT	GGC	TGC	TGC	TGT	GGA	GAC	2175
Thr	Pro	Val	Met	Ala	Ser	Pro	Cys	Cys	Gly	Cys	Cys	Cys	Gly	Asp	725
AGG	TCC	TCG	CCC	CCT	ACA	ACC	CCC	CTG	AGG	GCC	CCA	GAC	CCC	TCT	2220
Arg	Ser	Ser	Pro	Pro	Thr	Thr	Pro	Leu	Arg	Ala	Pro	Asp	Pro	Ser	740
CCA	GGT	GGG	GTT	CCA	CTG	GAG	GCC	AGT	CTG	TGT	CCG	GCC	TCC	CTG	2265
Pro	Gly	Gly	Val	Pro	Leu	Glu	Ala	Ser	Leu	Cys	Pro	Ala	Ser	Leu	755
GCA	CCC	TCG	GGC	ATC	TCA	GAG	AAG	AGT	AAA	TCC	TCA	TCA	TCC	TTC	2310
Ala	Pro	Ser	Gly	Ile	Ser	Glu	Lys	Ser	Lys	Ser	Ser	Ser	Ser	Phe	770
CAT	CCT	GCC	CCT	GGC	AAT	GCT	CAG	AGC	TCA	AGC	CAG	ACC	CCC	AAA	2355
His	Pro	Ala	Pro	Gly	Asn	Ala	Gln	Ser	Ser	Ser	Gln	Thr	Pro	Lys	785
ATC	GTG	AAC	TTT	GTC	TCC	GTG	GGA	CCC	ACA	TAC	ATG	AGG	GTC	TCT	2400
Ile	Val	Asn	Phe	Val	Ser	Val	Gly	Pro	Thr	Tyr	Met	Arg	Val	Ser	800



**FIGURE 5A**

```

1  MGWLCSGLLFPVSCLVLLQVASSGNMKVLQEPTCVSDYMSISTCEWKMN 50
   || || | | || || | | || || || || || || || || || ||
1  MGRLECTKFLTSVGCLILLVLTGSGSIKVLGEPTCFSDYIRTSTCEWF 50
   || || || || || || || || || || || || || || || || ||
51 PTNCSTELRLLYQLVFL.LSEAHTCIPENNGGAGCVCHLLMDDVVSADNY 99
   || || || || || || || || || || || || || || || || ||
51 AVDCSSQLCLHYRLMFFEFSENLTICIPNSASTVCVCHMEMNRPVQSDRY 100
   || || || || || || || || || || || || || || || || ||
100 TLDLWAGQQLLWKGSFKPSEHVKPRAPGNLTVHTNVSDTLTLLTWSNPYP 149
   || || || || || || || || || || || || || || || || ||
101 QMELWAEHRQLWQGSFSPSGNVKPLAPDNLTLHTNVSDWLLTWNLYPS 150
   || || || || || || || || || || || || || || || || ||
150 DNYLYNHLTYAVNIWSENDPADFRIYNVTYLEPSLRIAASLTLSKSGISYRA 199
   || || | || || | || || || || || || || || || || || ||
151 NNLLYKDLISMVNISREDNPAEFIVYNVTYKEPRLSFPINILMSGVYYTA 200
   || || || || || || || || || || || || || || || || ||
200 RVRAWAQCYNTTWSEWSPSTKWHNSYREPFQHLGVSVCIVILAVCL 249
   || || || || || || || || || || || || || || || || ||
201 RVRVRSQILTGTWSEWSPSITWYNHFQLPLIQRLPLGVTISCLCIPLFCL 250
   || || || || || || || || || || || || || || || || ||
250 LCYVSITKIKKEWWDQIPNPARSRLVAIIIQDAQSQWEKRSRGQEPAC 299
   || || || || || || || || || || || || || || || || ||
251 FCYFSITKIKKIWWDQIPTPARSPLVAIIIQDAQVPLWDKQTRSQUESTKY 300
   || || || || || || || || || || || || || || || || ||
300 PHWKNCCLKLLPCFLEHNMKRDEDPHKAAKEMPFQSGSKSAWCPVEISK 349
   || || || || || || || || || || || || || || || || ||
301 PHWKTCLDKLLPCLLKHRVKKKTDFPKAAPTKSLQSPGKAGWCPMEVSRT 350
   || || || || || || || || || || || || || || || || ||
350 VLWPE..SISVVRVCVELFEAPVECEEEEEVEEEKGSFCASPESSRD.DFQ 396
   || || || || || || || || || || || || || || || || ||
351 VLWPENVSVSVVRMELFEAPVQNVEEEDEIVKEDLSMSPENSGGCGFQ 400
   || || || || || || || || || || || || || || || || ||
397 EGREGIVARLTESLFDLLGEENGFCQQDMGESCLLPSPGSTSAHMPWD 446
   || || || || || || || || || || || || || || || || ||
401 ESQADIMARLTENLFSDLLEAENGGLGQSALAESCPLPSGSGQASVSWA 450
   || || || || || || || || || || || || || || || || ||
447 EFPSAGPKEAPPWGKEQPLHLEPSPPASPTQSPDNLTCTETPLVIAGNPA 496
   || || || || || || || || || || || || || || || || ||
451 CLPMGPSEEATCQVTEQPSHGP.LSGSPAQSAPTLACTQVPLVLADNPA 499
   || || || || || || || || || || || || || || || || ||
497 YRSFSNSLSQSPCPRELGPDLLARHLEEVEPEMPCVPQLSEPTTVPQPE 546
   || || || || || || || || || || || || || || || || ||
500 YRSFSDCCSPAPNPGE LAPEQQQADHLEEEPPSPADPHSSGP...PMQP 546
   || || || || || || || || || || || || || || || || ||
547 PETWEQILRRNVLQHGAAAAPVSAPTSQGYQEFVHAVEQGGTQASAVVGLG 596
   || || || || || || || || || || || || || || || || ||
547 VESWEQILHMSVLQHGAAAGSTPAPAGGYQEFVQAVKQGAADPGVPGVR 596
   || || || || || || || || || || || || || || || || ||
597 PPGEAGYKAFSSLLASSAVSPEKCGFGASSGEEGYKPFQDLIPGCPGDP 646
   || || || || || || || || || || || || || || || || ||
597 PSGDPGYKAFSSLLSSNGIRGDTAAAGTDDGHGGYKPFQNPVP....NQS 642

```

**FIGURE 5B**

647 PVPVPLFTFGLDREPPRSPQSSHLPSSSPEHLGLEPGEKVEDMPKPPLPQ 696  
| | | | | | | | | | | | | | | | | | | | | |  
643 PSSVPLFTFGLDTELSPSPLNSDPPKSPPECLGLELGLKGGDWVKAPPPA 692  
697 EQATDPLVDSLGSIVYSALTCHLCGHLKQCHGQEDGGQTPVMASPCCGC 746  
| | | | | | | | | | | | | | | | | | | | | |  
693 DQVPKPFGDDLGFIVYSSLTCHLCGHLKQHHSQEEGGQSPIVASPGCGC 742  
747 CCGDRSSPPTTPLRAPDSPGGVPLEASLCPASLAPSGISEKSKSSSFH 796  
| | | | | | | | | | | | | | | | | | | | | |  
743 CYDDRSPSLGSLSGALESCPEGIPPEANLMSAPKTPSNLSGEGK..... 786  
797 PAPGNAQSSSQTPKIVNFVSVGPTYMRVS 825  
| | | | | | | | | | | | | | | | | | | | | |  
787 .GPGHSPVPSQTTE....VPVGALGIAVS 810

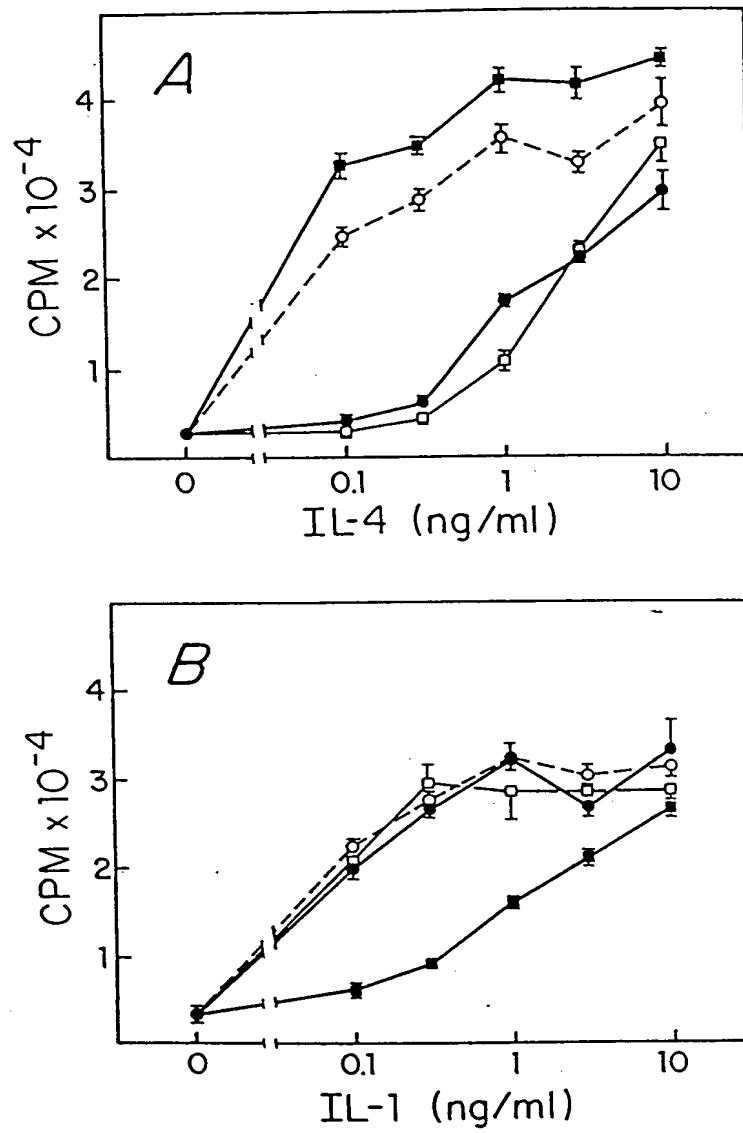


FIGURE 6

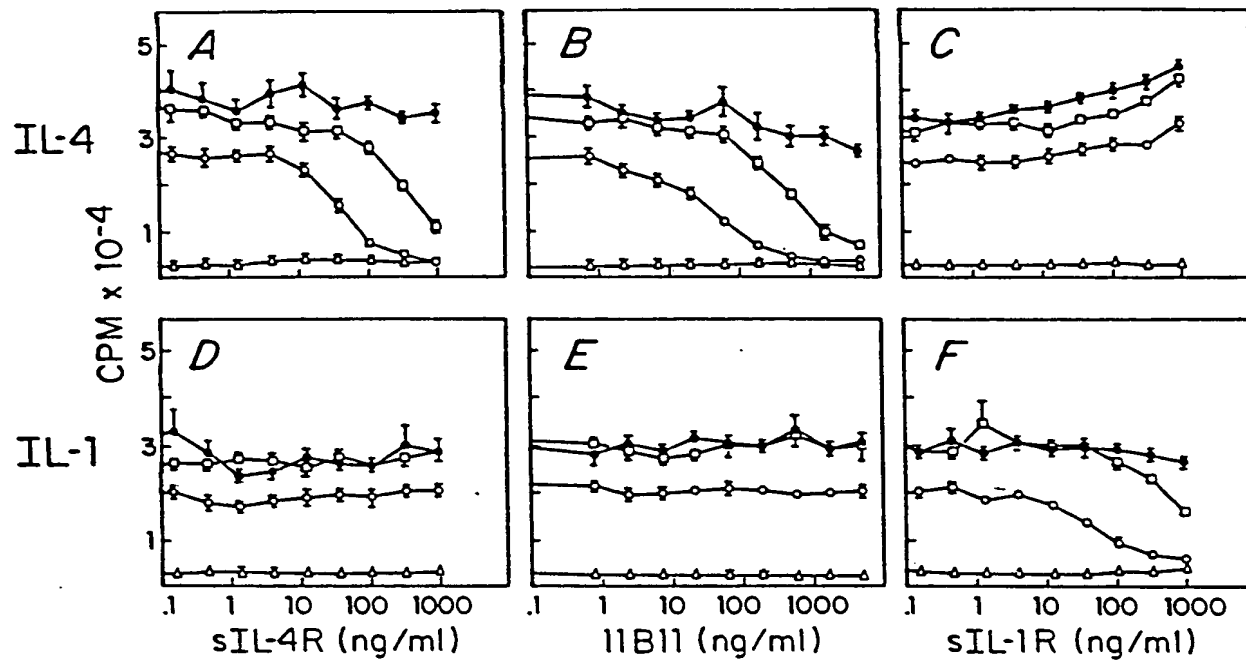


FIGURE 7

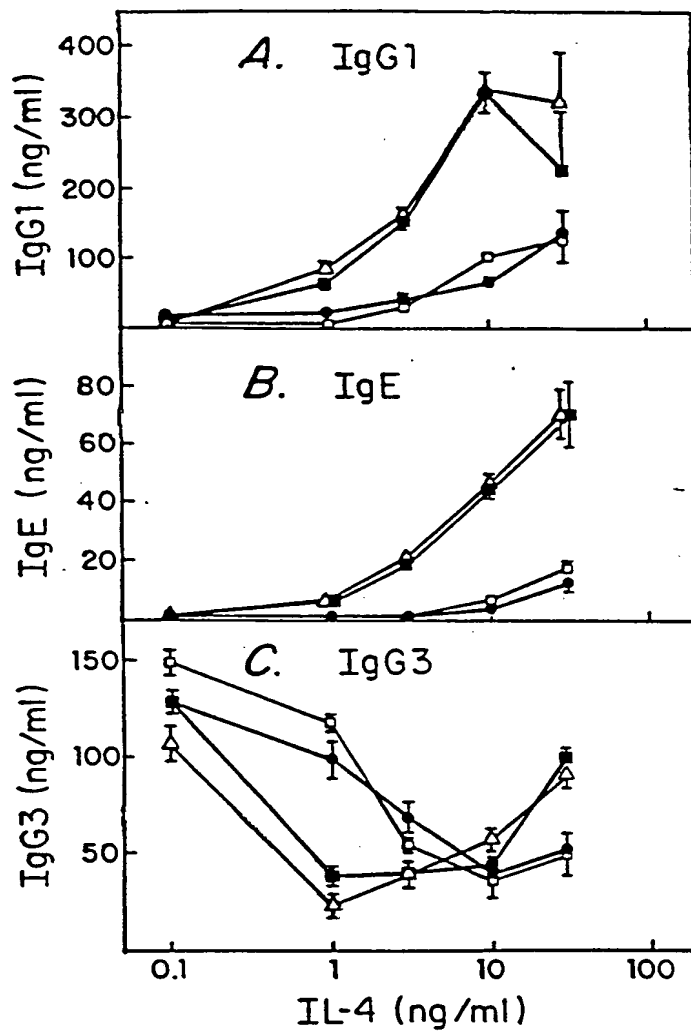


FIGURE 8

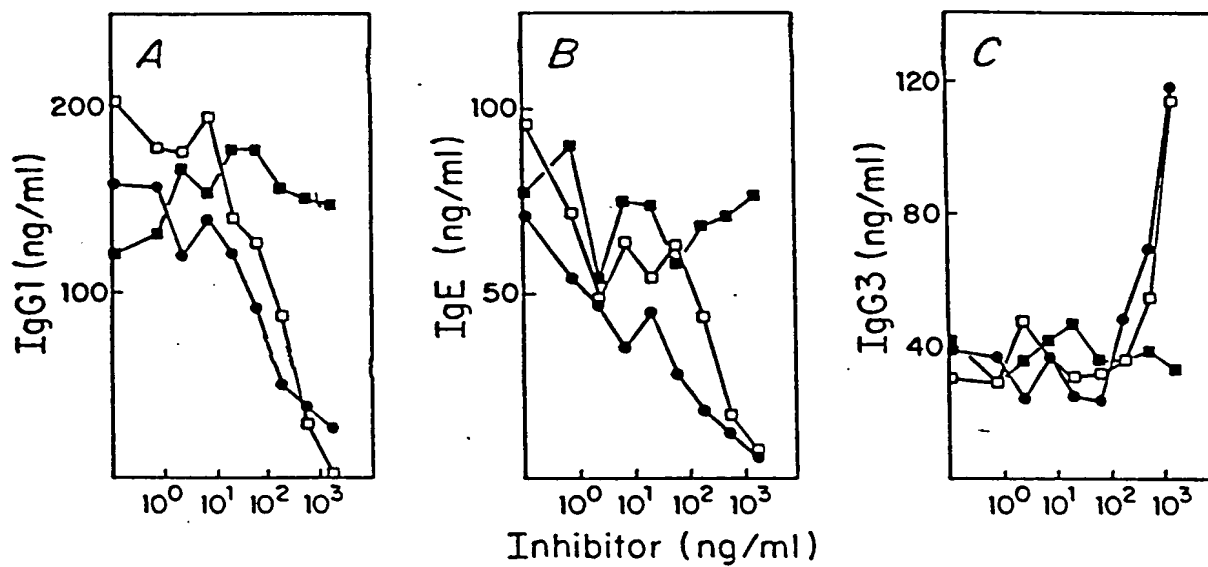


FIGURE 9

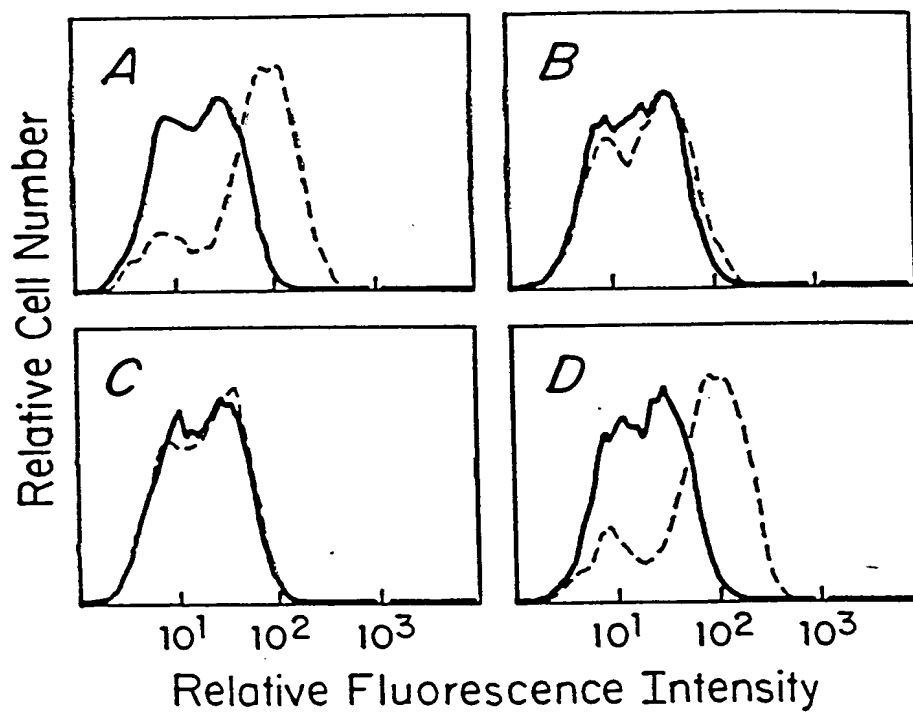


FIGURE 10

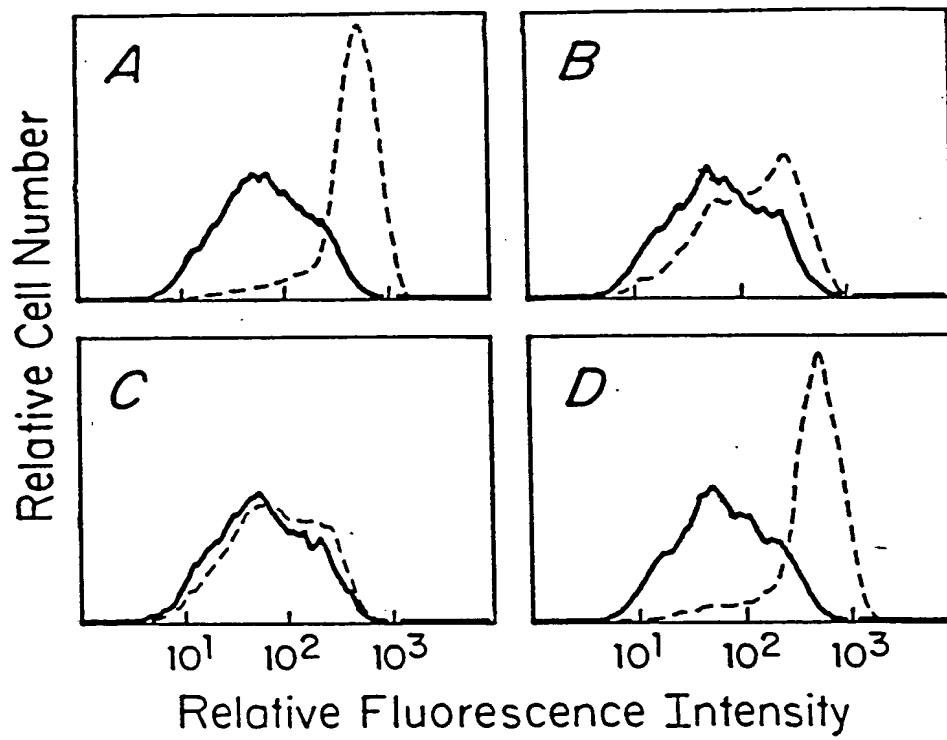


FIGURE 11



### sIL-4R INHIBITION OF POLYCLONAL Ig E SERA LEVELS

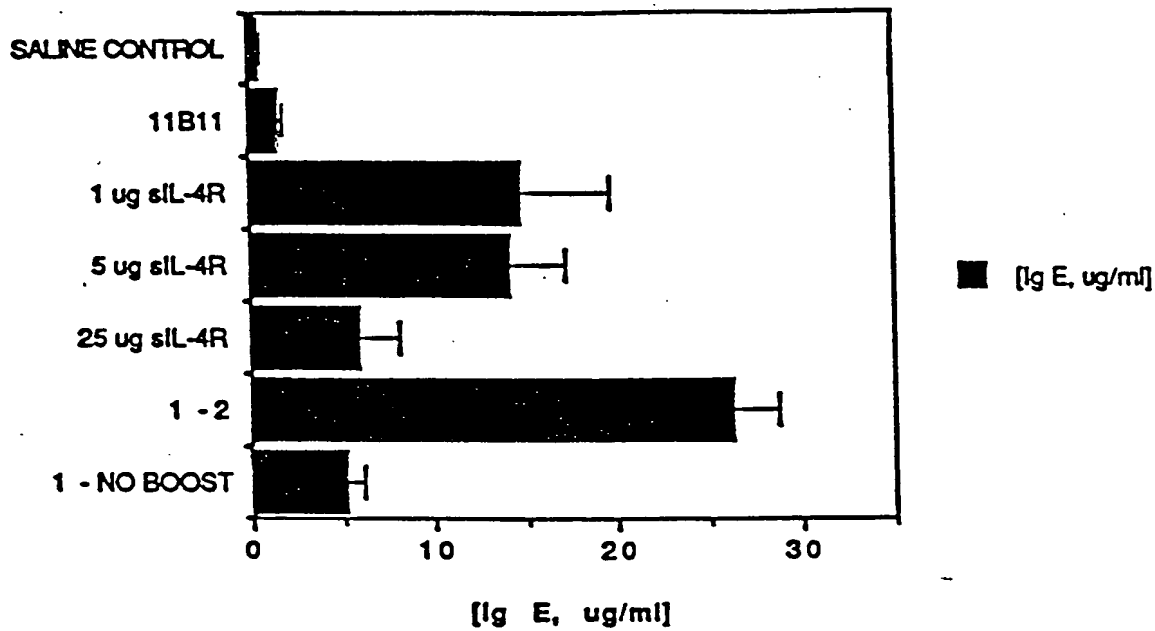


FIGURE 12

### sIL-4R INHIBITION OF ANTI-TNP-KLH Ig E SERA LEVELS

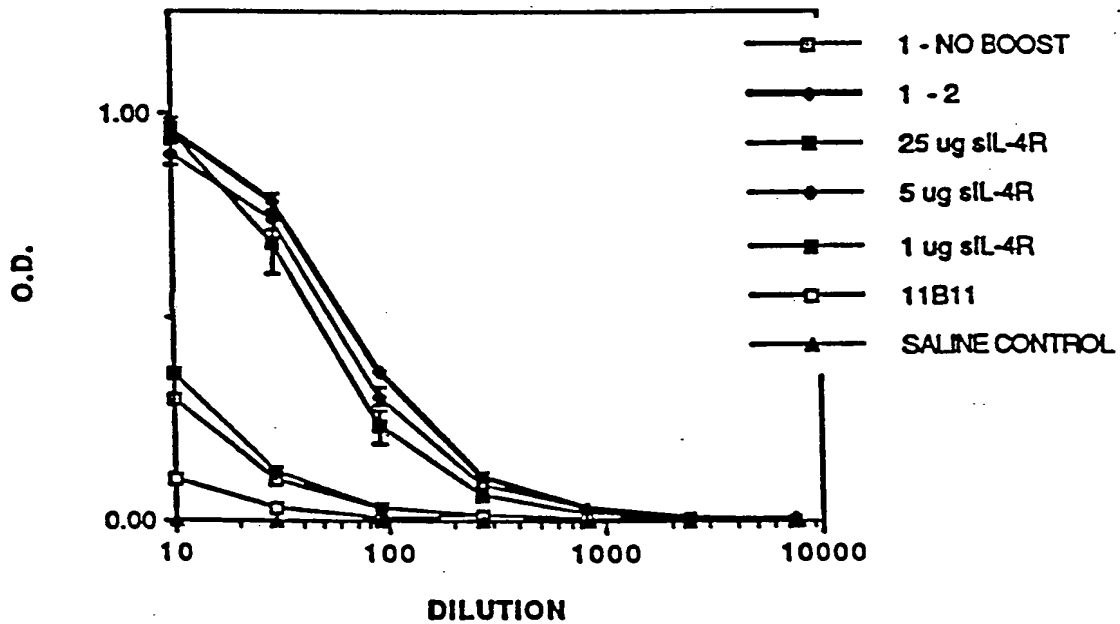


FIGURE 13

### RAT anti-Ig D EFFECTS ON SERA Ig E LEVELS

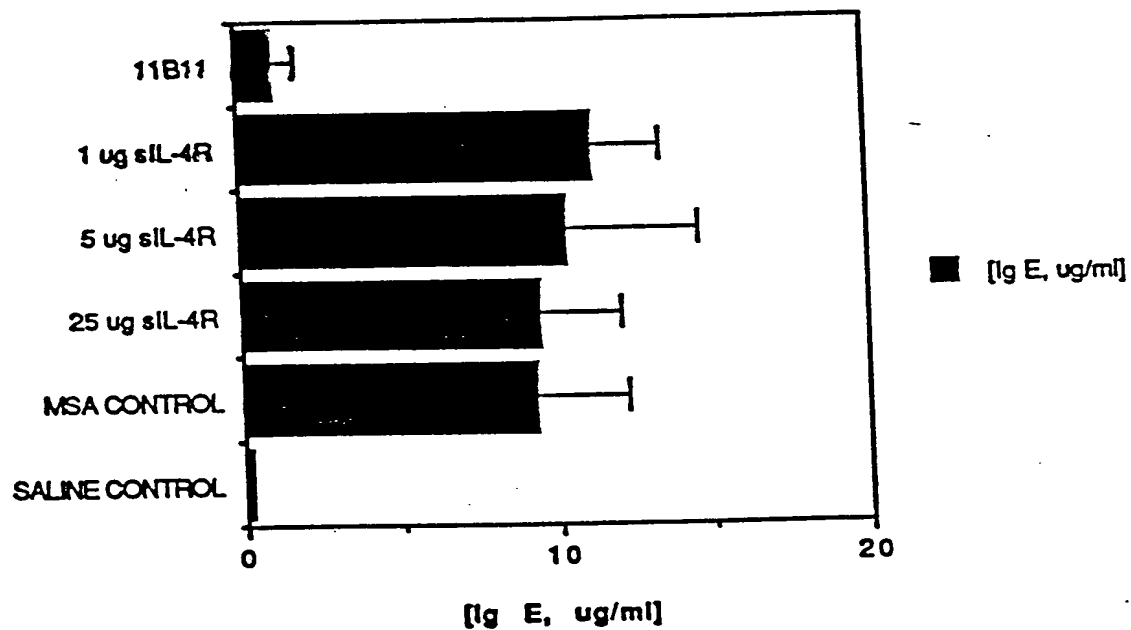


FIGURE 14

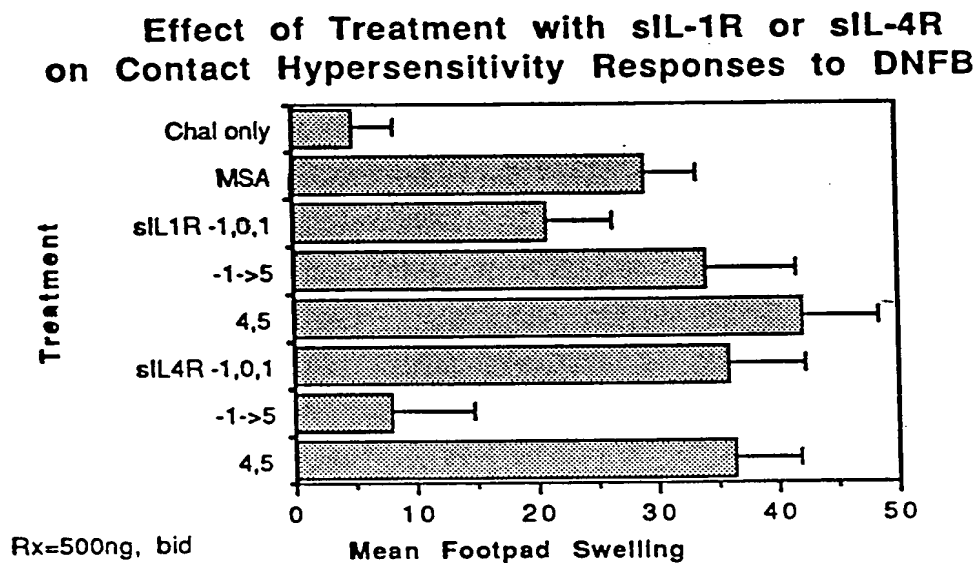


FIGURE 15

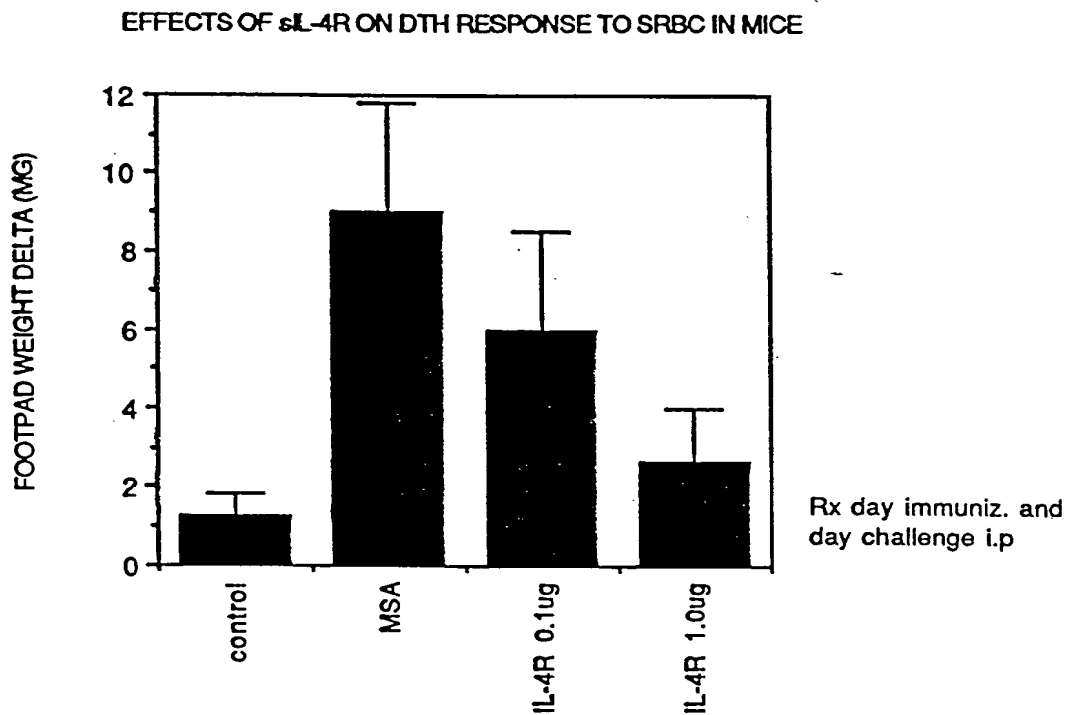


FIGURE 16